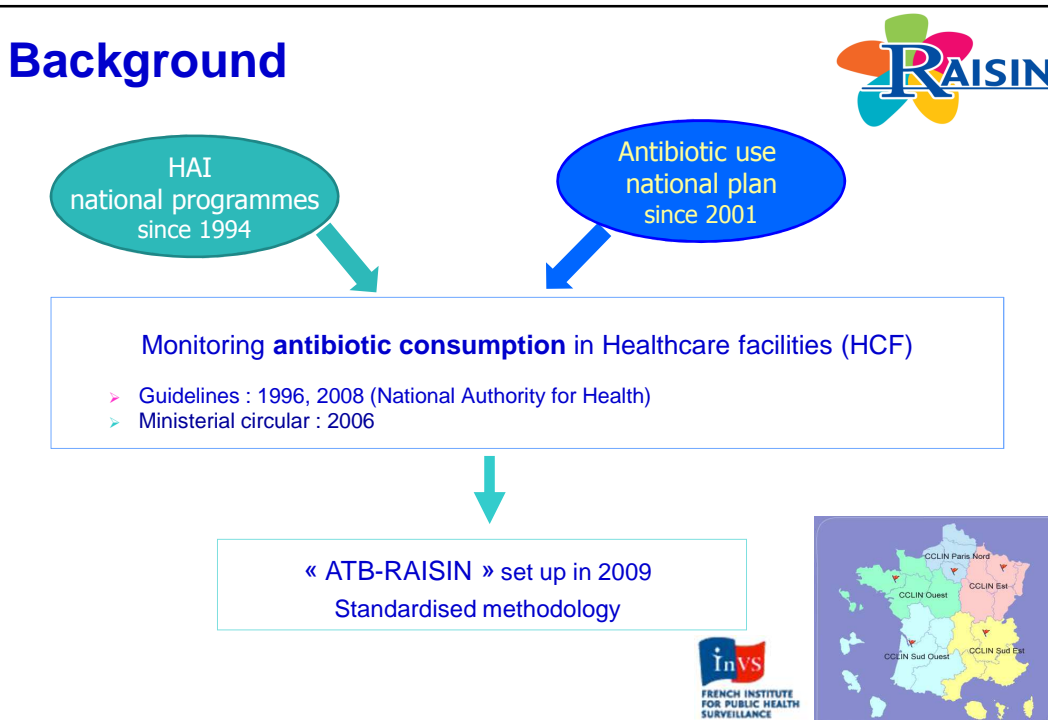




Monitoring antibiotic consumption in hospitals: results from the French nationwide network "ATB-RAISIN" in 2011



C. DUMARTIN, A.M. ROGUES, F. L'HERITEAU, M. PEFAU, X. BERTRAND, P. JARNO, S. BOUSSAT, M. GIARD, A. INGELS, L. LACAVE, L. MOUCHOT, A. MACHUT, S. ALFANDARI, B. SCHLEMMER, AC CREMIEUX, E. REMY, S. TOURATIER, S. VAUX, for the ATB-RAISIN network.



Objectives

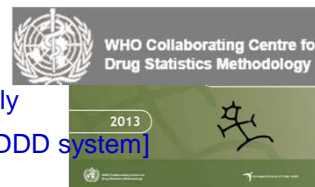


- To describe antibiotic consumption in French HCF at hospital and at ward level
 - To provide a tool for benchmarking
 - To promote analysis of consumption data against antimicrobial resistance rates
 - To identify areas for improvement at the hospital level and at the national level
- To monitor trends

Methods



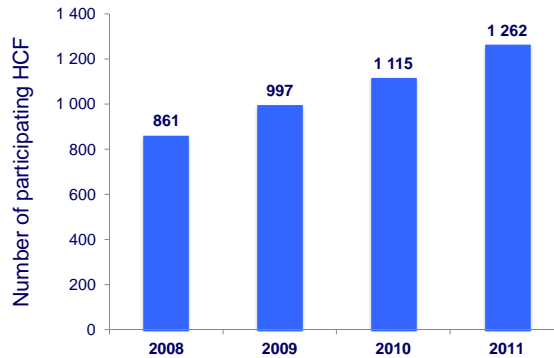
- Retrospective survey
- Voluntarily participating HCF
- Self-completion questionnaire
 - Antibiotics for systemic use
 - J01 AND Rifampicin + oral imidazole derivatives
 - Dispensed by the pharmacy for inpatients wards only
 - Number of defined daily doses (DDD) [WHO, ATC/DDD system]
 - Administrative data
 - HCF type, ward clinical activity, no. patient-days
 - Antimicrobial resistance
 - Selected antibiotic/bacteria combinations



Results



- Participation
 - 1262 HCF in 2011
 - Coverage: 60% PD at national level

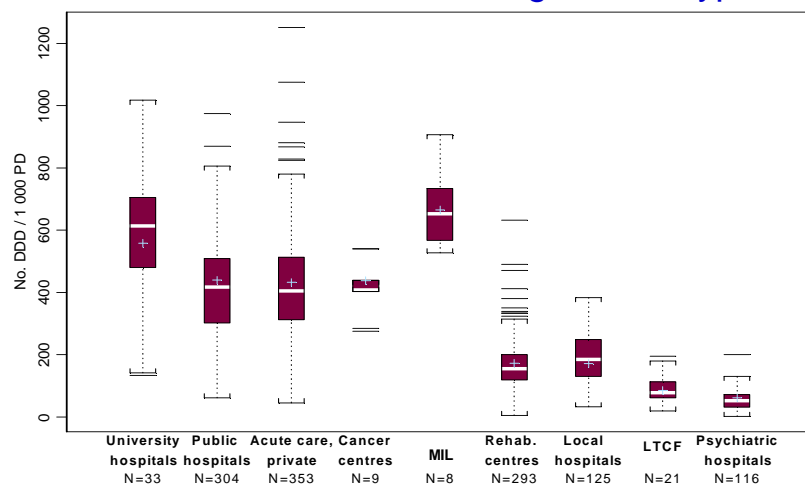


Results: ATB RAISIN 2011



- Total antibiotic use in 1 262 HCF: 372 DDD/1000 PD
 - Variations in total antibiotic use according to HCF type

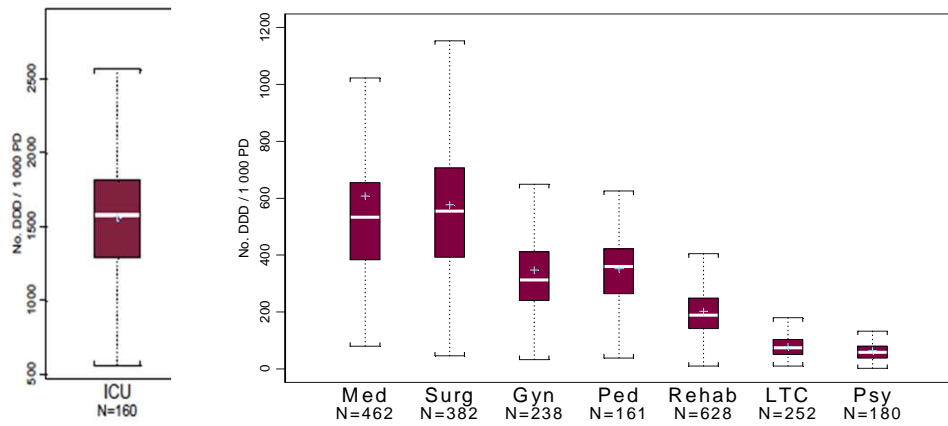
- Box-plot:
- Outlier
 - Max value within P75+1.5IQR
 - P75
 - Median
 - Pooled mean (+)
 - P25
 - Max value within P75+1.5IQR
 - Outlier



Results: ATB RAISIN 2011



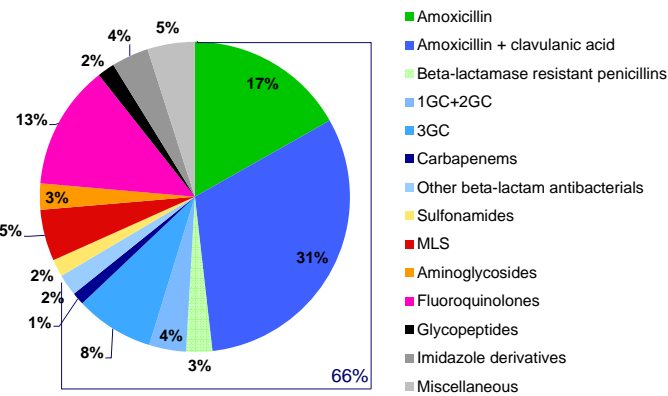
- Variations in total antibiotic use according to ward/clinical activity



Results: ATB-RAISIN, 2011



- Most used antibiotics in 1262 HCF, 2011



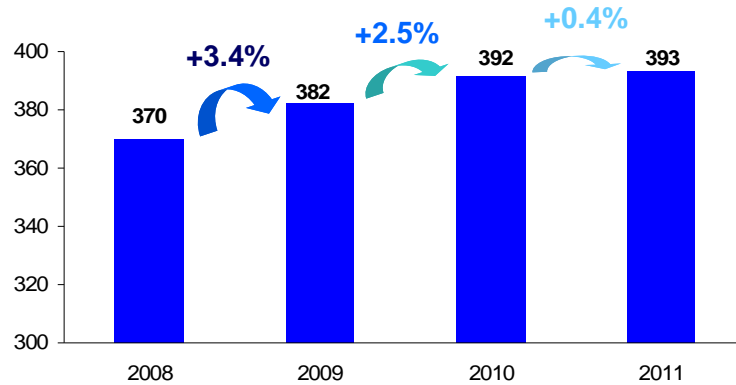
Top 5

Antibiotic	DDD / 1 000 PD
Amoxiclav	117
Amoxicillin	62
Ceftriaxone	19
Ofloxacin	19
Ciprofloxacin	14

Results: ATB-RAISIN, 2008-2011



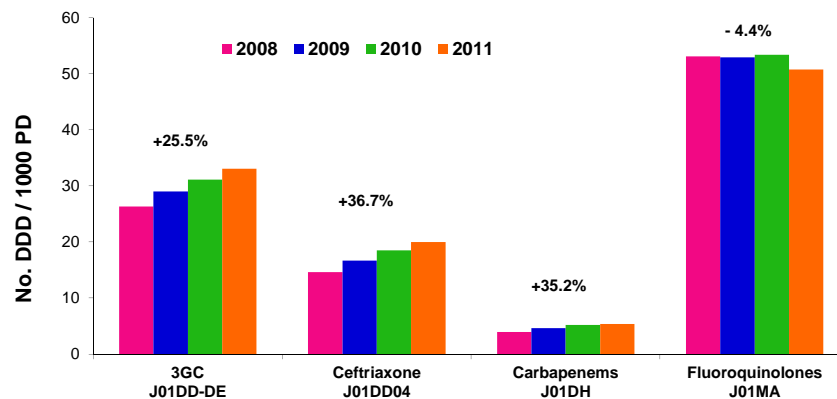
- Trends in total antibiotic use, 2008 – 2011 (number of DDD/1000 PD), cohort of 614 hospitals
- + 6.4% over the period... but trend toward stabilisation



Results: ATB-RAISIN, 2008-2011



Antibiotic use in number of DDD/1000 PD in 614 hospitals, 2008-2011 (% change between 2008 and 2011)



Results: ATB-RAISIN, 2008-2011



- Contrasted changes in AMR

Incidence of antimicrobial resistance in selected bacteria, in number of strains/1000 PD, in hospitals providing data each year

	No. HCF	2008	2009	2010	2011	% (2008-2001)
Methicillin resistant <i>S. aureus</i>	229	0.58	0.54	0.54	0.51	-12%
<i>Enterobacter cloacae</i> resistant to cefotaxime	115	0.18	0.21	0.22	0.23	28%
<i>Escherichia coli</i> resistant to cefotaxime	274	0.24	0.31	0.37	0.41	71%

Discussion



- Limitations

- Self reporting, retrospective survey
- Quantity instead of quality

Discussion



- Participation in ATB-RAISIN increased
- Antibiotic consumption did not decrease in HCF



- Stabilisation of total use: good news in a context of decreasing length of stay
- Decrease in FQ use



- Actions needed to reduce the use of ceftriaxone

Perspectives



Mobilisation still needed!

- Data used for action
 - At the local level
 - Analysis of consumption to foster implementation of actions such as practice audits, restricted dispensation
 - ✓ 87% HCF claimed having taken actions (2013, SW)

Perspectives



- Data used for action

- At regional and national levels

- Awareness raised on antibiotic exposure: FQ, carbapenems, 3GC...
 - ✓ Tools for audits, educational material
 - Best use of data: quality indicator?



- New regulation on antibiotic policies in HCF



Frontline, 22-10-2013



Thanks to all healthcare professionals
in participating hospitals

More information on antibiotic use in French hospitals

<http://www.cclin-arlin.fr/>

<http://www.invs.sante.fr/raisin>



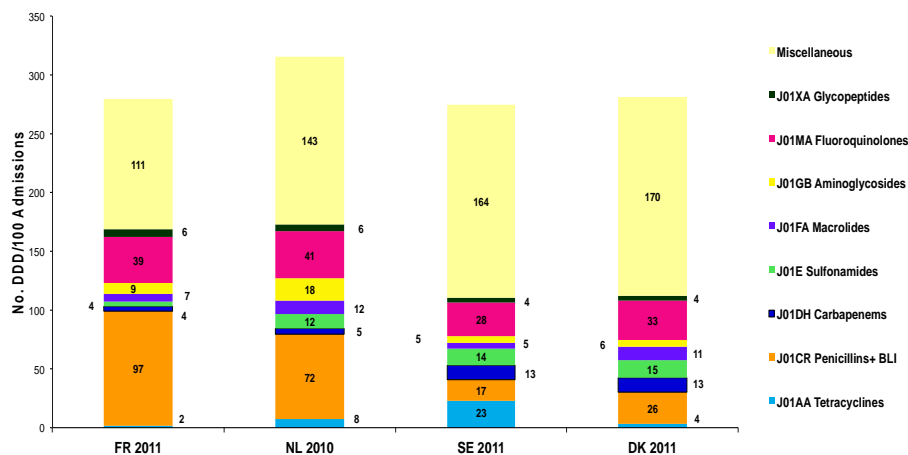


Additional slides

Discussion



- Comparisons with other European countries
 - Common core: acute care, total use J01, no.DDD/100 admissions
 - Different patterns of J01 antibiotic use



ATB-RAISIN Network: Surveillance of antibiotic consumption in hospitals



- ATB-RAISIN steering committee

5 CCLIN and InVS

- A. INGELS, P. JARNO CCLIN West
- S. BOUSSAT, L. MOUCHOT, CCLIN East
- L. LACAVÉ, F. L'HÉRITEAU, CCLIN Paris & North
- M. GIARD, A. MACHUT, CCLIN S-East
- C. DUMARTIN, M. PÉFAU, AM. ROGUES, CCLIN S-West
- S. VAUX, InVS

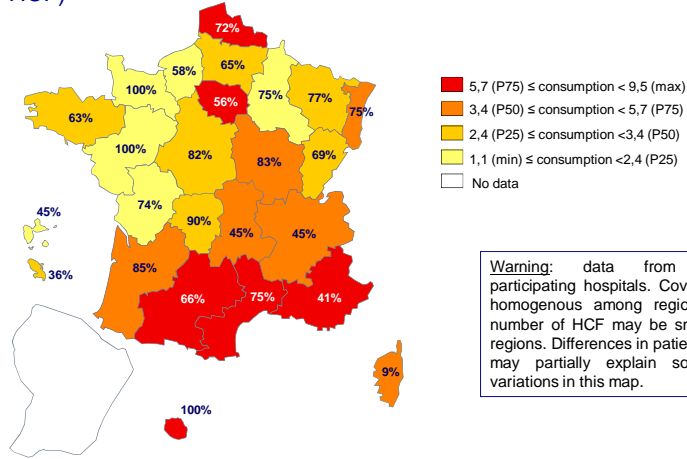
Other experts

- B. SCHLEMMER, AC. CREMIEUX, French Committee for prudent use of antibiotics
- S. ALFANDARI, French infectious disease society (SPILF)
- X. BERTRAND, Microbiology, Besançon
- S. TOURATIER, Pharmacy, GH St Louis, Paris
- E. REMY, Regional observatory for medicines, Rouen

Results: ATB-RAISIN, 2011



Carbapenems consumption in number of DDD/1 000 PD (regional pooled mean), in public non teaching hospital (CH) and private acute care facilities (MCO) and surveillance coverage (% beds) (N= 654 HCF)



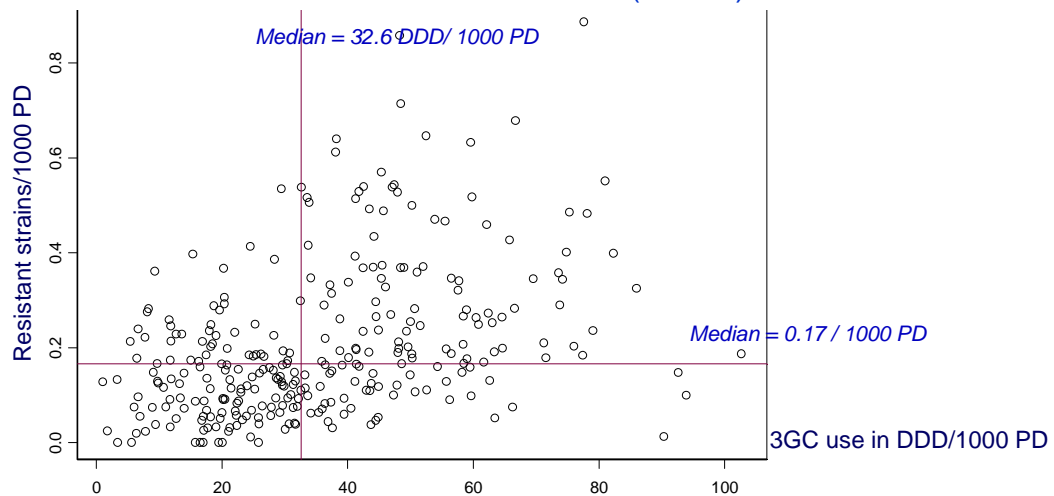
Warning: data from voluntarily participating hospitals. Coverage is not homogenous among regions and the number of HCF may be small in some regions. Differences in patients case-mix may partially explain some of the variations in this map.

Fait avec Phlicarto - <http://phlicarto.free.fr>

Results: ATB-RAISIN, 2011



Third generation cephalosporins (3GC) consumption and incidence of cefotaxime-resistant *Enterobacter cloacae* (N=296)



Results: ATB-RAISIN, 2011



Third generation cephalosporins (3GC) consumption and incidence of cefotaxime-resistant *Enterobacter cloacae* (N=296)

